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8791	7590	11/04/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			MITCHELL, JASON D	
			ART UNIT	PAPER NUMBER
			2193	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/037,530	UNICE, W. KYLE
	Examiner	Art Unit
	Jason Mitchell	2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 September 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-25 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



TODD INGBERG
PRIMARY EXAMINER

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

This action is in response to a Request for Continued Examination filed on 9/32/05.

At applicant's request claims 1 and 21 have been amended, claims 1-25 are pending in this application.

Response to Arguments

In the third paragraph on pg. 7, Applicant states:

In response, applicant submits a declaration pursuant to 37 C.F.R. § 1.131 enclosed herewith to overcome Lin. The submitted declaration illustrates that the present application had been conceived and reduced to practice in the United States at least prior to November 29, 2001, the filing date of Lin. Reduction to practice occurs upon proof that the inventor had prepared drawings or other descriptions of the invention that are sufficiently specific to enable a person skilled in the art to practice the invention. (see Pfaff v. Wells Elec., Inc., 525 U.S. 55).

The Declaration filed on 9/23/05 under 37 CFR 1.131 has been considered but is ineffective to overcome the Lin reference.

Examiner notes that the declaration is signed by Applicant's representative, Ashley R. Ott, and not by a qualified party as required by 37 CFR 1.131. Further the 'invention disclosure form' provided as Exhibit A is not dated and consequently does not constitute proof 'that the subject matter claimed in the Application had been reduced to practice in the United States prior to November 29, 2001'.

Still further, it is unclear if Exhibit A is 'sufficiently specific to enable a person skilled in the art to practice the invention' and resultantly may not constitute proof of 'reduction to practice'.

Accordingly rejections based on the Lin reference are maintained.

Applicant's arguments on pg. 8, regarding the 35 USC 103(a) rejection of claim 21, over Carney in view of the Linux Home Page have been fully considered but they are not persuasive.

In the fourth paragraph on pg. 8, Applicant states:

Claim 21 has been amended to include limitations similar to those of claim 1. Therefore, for the reasons stated above with respect to the 35 U.S.C. 102(e) rejection as being anticipated by Lin, claims 21 and 23-25 are patentable over Carney in view of Linux Home Page.

Examiner Respectfully disagrees. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

The rejection being discussed does not rely on Lin and consequently is not effected by arguments relating to Lin.

Further, Examiner could find no reference to Carney's system requiring 'version identification data' to create his 'symbol definition file'. Still further the disclosure that Carney's system relates to a 'dynamically configurable operating system' (col. 3, lines 43-45) and builds the 'symbol definition file' incorporating the changes to the operating system (col. 5, lines 13-15 'building a symbol definition

file comprising current symbol definitions'), would seem to indicate that Carney's system does not require such 'version identification data'.

Accordingly the rejections of claims 21 and 23-25 are maintained. Further the rejection of dependent claim 22 is also maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-25 rejected under 35 U.S.C. 102(e) as being anticipated by US 2003/0,101,290 A1 to Lin et al. (Lin).

Regarding Claim 21: Lin discloses defining symbols to be imported from a Linux kernel (par. [0017] lines 3-5 'recognizes the naming convention of the function calls from the kernel'), the symbols being uniquely associated with a particular version of the Linux kernel (par. [0007], lines 9-14 'A change to the source code of the kernel ... results in a change to the names of the function calls') and used by a device driver (par. [0017] lines 5-7 'the compiled service layer interacts with the compiled driver modules'); declaring structures that describe application program interfaces (APIs) to be imported from the Linux kernel for operation of the device driver (par. [0007], lines 9-14 'function calls'); obtaining the symbols that define identification data from the Linux kernel (par. [0017] lines 3-5 'the

naming convention'); combine the symbols with driver code to form a kernel version independent device driver (par. [0022], lines 6-9 'the compiled service layer is linked to the compiled driver modules'); and dynamically importing the kernel version independent device driver in the Linux kernel (par. [0022], lines 6-9 'forming a dynamic device driver').

Regarding Claim 23: The rejection of claim 21 is incorporated; further Lin implicitly discloses function stubs for registering the device driver (par. [0020], lines 16-18 'the device driver is loaded'). In order to load the driver, some form of stub must be called.

Regarding Claim 24: The rejection of claim 21 is incorporated; further Lin discloses defining a memory structure of a particular device for which the device driver is configured (par. [0009], lines 11-13 'driver modules being specific to a hardware architecture').

Regarding Claim 25: The rejection of claim 24 is incorporated; further Lin inherently discloses iteratively importing each symbol's kernel address and places the address into a local variable for use by the device driver (par. [0016], lines 11-14 'a software interface between the kernel ... and the driver modules'). To act as an interface each function call must be linked by address to the object being interfaced.

Claims 1-2, 10-12 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,289,396 to Keller et al. (Keller).

Regarding Claims 1 and 11: Keller discloses distributing a computer program component, which includes code defining functionality associated with the computer program module (col. 7, lines 50-52 'a number of operating system interface modules') and excludes version identification data, for the computer program module to execute the functionality under command from a master computer program (col. 7, lines 47-50 'The kernel layer 54'); and distributing an installation module (col. 7, lines 61-64 'The shell module 72 is the initial component of the device driver 50') which, when run on a computer, obtains the version identification data from the master computer program and combines the version identification data and the computer program component to define the computer program module (col. 8, lines 6-11 'the shell module 72 determines ... compliment of operating system interface modules that are required to complete the implementation device driver 50').

Regarding Claims 2 and 12: The rejections of claims 1 and 11 are incorporated respectively; further Keller discloses the master computer program is an operating system (col. 7, lines 47-50 'The kernel layer 54') and the computer program module is a device driver (col. 7, lines 61-64 'device driver 50'), the master computer program being identifiable by the version identification data (col. 2, lines 35-39 'a device driver for a particular operating system').

Regarding Claims 10 and 20: The rejections of claims 1 and 11 are incorporated respectively; further Keller discloses the installation module forms part of the computer program component (Fig. 2 Device Driver 50 and Shell 72).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0,101,290 A1 to Lin et al. (Lin).

Regarding Claims 1 and 11: Lin discloses a method of distributing a computer program module, the method including distributing a computer program component (par. [0012], lines 1-3 'method of distributing device driver software') which includes code defining functionality associated with the computer program module (par [0016] line 7-9 'a set of one or more driver modules') and distributing an installation module (par. [0016] lines 10-11 'an open source service layer') which, when run on a computer, obtains the version identification data from the master computer program (par. [0017] lines 2-3 'configured with respect to the kernel') and combines the version identification data and the computer program component to define the computer program module (par. [0017] lines 5-8 'the compiled service layer interacts with the compiled driver modules').

Lin discloses the computer program component may include version identification data (par. [0020], lines 16-18 'a pre-compiled device driver ... associated with the kernel') however Lin also teaches that 'driver modules do not have to recognize changes to the kernel' (par. [0017] lines 11-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to ignore the version of the kernel by excluding the version identification data held in the computer program component (par. [0020], lines 16-18 'pre-compiled driver'), because the version identification disclosed in Lin (par. [0020], lines 16-18) identifies the kernel version, and one of ordinary skill would have been motivated to provide a driver that would work on any version of the kernel with out disclosing proprietary information (par. 11 'preventing the disclosure of sensitive proprietary information').

Regarding Claims 2 and 12: The rejections of claims 1 and 11 are incorporated, respectively; further Lin discloses the master computer program is an operating system (par. [0016] lines 3-4 'an open source operating system') and the computer program module is a device driver, (par. [0016] line 2 'dynamic device driver') the master computer program being identifiable by the version identification data (par. [0020] lines 5-8 'standardized versions of the open source operating system').

Regarding Claims 3 and 13: The rejections of claims 2 and 12 are incorporated, respectively; further Lin discloses the master computer program is selected from the group including a Linux operating system (par [0020] lines 8-10 'As an example ... an open-source Linux operating system').

Regarding Claims 4 and 14: The rejections of claims 3 and 13 are incorporated, respectively; further Lin discloses the functionality included in the computer program component allows the computer program module to execute an application program interface (API) exported from the master computer program (par. [0019], lines 3-5 'serves as an interface between operating system kernel and device driver modules').

Regarding Claim 5: The rejection of claim 3 is incorporated; further Lin discloses compiling the computer program component into an object file prior to distribution of the computer program module (par. [0018] lines 11-12 'each of the device driver modules is provided to users in executable, or compiled, format').

Regarding Claim 6 and 15: The rejections of claims 5 and 14 are incorporated, respectively; further Lin discloses obtaining version identification data from the operating system and generating a version object file that includes the identification data (par. [0017] lines 2-3 'the compiled service layer is configured with respect to the kernel').

Regarding Claims 7 and 16: The rejections of claims 6 and 15 are incorporated, respectively; further Lin discloses linking the version object file and the computer program component (par. [0022] lines 6-9 'compiled service layer is linked to the compiled driver modules').

Regarding Claims 8 and 17: The rejections of claims 7 and 16 are incorporated, respectively; further Lin inherently discloses obtaining a kernel specific address of a module list and passing the address to the computer program module.

Lin explicitly discloses a module list (par. [0016] lines 7-9 'a set of one or more driver modules') and further discloses the computer program module having accessing the modules in the module list (par. [0019], lines 6-10 'service layer ... interfaces with proper device driver module'). In order to do this, the service layer must have knowledge of the kernel specific address of the module list.

Regarding Claim 9: The rejection of claim 8 is incorporated; further Lin does not explicitly disclose that the device driver is one of a printer driver, a serial port device driver, and Ethernet device driver, and a disk drive device driver, but does disclose that a device driver 'provides the low level interface between the hardware elements of the computer system and the operating system' (par. [0002] lines 7-12). Because all of the devices claimed are represented in hardware it would have been obvious to one of ordinary skill in the art to include one of a printer driver, a serial port device driver, a Ethernet device driver, and a disk drive device driver as the device drivers disclosed in Lin (par [0016] line 7-9 'a set of one or more driver modules').

Regarding Claims 10 and 20: The rejections of claims 1 and 11 are incorporated, respectively; further Lin discloses the installation module forms part of the Computer Program Component (par. [0016] lines 7-11 'The second element of the device driver is an open source service layer').

Regarding Claim 18: The rejection of claim 17 is incorporated; further Lin implicitly discloses the computer program product retrieving a module list export head and importing the required application program interfaces (APIs) and explicitly discloses ignoring the version identification data (par. [0017] lines 11-13

'driver modules do not have to recognize changes to the kernel'). Interfacing with the device driver (par. [0019], lines 6-10 'interfaces with the proper device driver module to complete the requested function call') necessarily includes exporting an API from the module list (driver) and importing that API to the service layer.

Regarding Claim 19: The rejection of claim 13 is incorporated; further Lin discloses the device driver is dynamically loaded (par. [0022] lines 6-11 'forming a dynamic device driver').

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,289,396 to Keller et al. (Keller).

Regarding Claim 9: The rejection of claim 2 is incorporated; further, Keller does not explicitly disclose the device driver is one of a printer driver, a serial port device driver, an Ethernet device driver, and a disk drive device driver. But does disclose his system contains a disk drive device driver (col. 5, lines 52-53 'preferably including a disk drive controller').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to direct Keller's system to installing and loading a disk drive device driver (col. 5, lines 52-53 'a disk drive controller') to apply the functionality disclosed by Keller to the loading of a disk drive device driver (Abstract 'couples an operating system to a computer interface of a controller device').

Claims 3-8 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,289,396 et al. (Keller) in view of the 'Linux Home Page' as posted 12/01/2001.

Regarding Claims 3 and 13: The rejections of claims 2 and 12 are incorporated, respectively; further Keller does not disclose that the operating system is selected from the group including a Linux operating system and a UNIX operating system.

However, The Linux Homepage teaches that Linux is a free (col. 1, par. 1) and powerful operating system (col. 2, par. 1).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to employ Keller's system in a Linux environment because the Linux environment is a free (col. 1, par. 1) and powerful operating system (col. 2, par. 1)

Regarding Claims 4 and 14: The rejections of claims 3 and 13 are incorporated respectively; further Keller discloses the functionality included in the computer program component allows the computer program module to execute an application program interface (API) exported from the master computer program (col. 7, lines 47-50 'an operating system API').

Regarding Claim 5: The rejection of claim 3 is incorporated; further Keller inherently discloses compiling the computer program component into an object file prior to distribution of the computer program module. Note that Keller discloses executing the functionality of the driver (col. 3, lines 55-61 'common execution streams') hence indicating that the drivers are already compiled.

Regarding Claims 6 and 15: The rejections of claim 5 and 14 are incorporated respectively; further Keller discloses obtaining version identification data from the operating system and generating a version object file that includes the version identification data (col. 8, lines 13-14 'logically linked into the device driver 50').

Regarding Claims 7 and 16: The rejections of claims 6 and 15 are incorporated respectively; further Keller discloses linking the version object file and the computer program component (col. 8, lines 13-14 'logically linked into the device driver 50').

Regarding Claims 8 and 17: The rejections of claims 7 and 16 are incorporated respectively; further Keller discloses obtaining a kernel specific address of a module list and passing the address to the computer program module (col. 7, lines 55-57 'API entry points are provided by an operating system (O/S) module 70').

Regarding Claim 18: The rejection of claim 17 is incorporated; further Keller discloses the computer program product retrieves a module list export head (col. 11, lines 65-66 'The operating system object provides API call access') and imports the required application program interfaces (APIs) ignoring the version identification data (Col. 3, lines 57-61 'operating system interface objects').

Regarding Claim 19: The rejection of claim 13 is incorporated; further Keller discloses the device driver is dynamically loaded (col. 8, lines 40-44 'The dynamic loading capability'), but does not disclose that the device driver is loaded into a Linux kernel.

However it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement Keller's system in a Linux kernel for the same reasons given regarding the rejection of claim 3.

Claims 21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,303,392 to Carney et al. (Carney) in view of the 'Linux Home Page' as posted 12/01/2001.

Regarding Claim 21: Carney discloses defining symbols to be imported from an operating system kernel, the symbols being uniquely associated with a particular version of the operating system kernel (col. 3, lines 43-45 'providing access to current symbol definitions of a ... operating system') and used by a device driver (col. 2, lines 2-3 'a utility ... requests to open the symbol definition image file'); declaring structures that describe application program interfaces (APIs) to be imported from the operating system kernel for operation of the device driver (col. 5, lines 13-15 'a symbol definition file comprising current symbol definitions of the operating system'); obtain the symbols that define identification data from the operating system kernel (col. 6, lines 49-52 'all current symbol definitions'); combine the symbols with driver code functionality to form a kernel version independent device driver (col. 7, lines 9-12 'provides reference to this symbol definition image file to the requesting utility'); and dynamically importing the device driver in the operating system kernel (col. 3, lines 43-44 'a dynamically configured operating system'). Carney does not explicitly disclose the operating

system being a LINUX system, but does disclose the use of a UNIX system (col. 2, lines 64 'UNIX system').

On 12/01/2001 the LINUX homepage (www.linux.org) described Linux as 'a Unix-type operating system'.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Carney's invention on a LINUX system instead of a UNIX system because one of ordinary skill in the art would have desired the ability to deploy the invention to a broader range of operating systems.

Regarding Claim 23: The rejection of claim 21 is incorporated; further Carney discloses use of function stubs for registering the device driver (col. 5, lines 5-7 'segment loader is used for dynamically loading the relocatable segments').

Regarding Claim 24: The rejection of claim 21 is incorporated; further Carney discloses defining a memory structure of a particular device (col. 6, lines 62-66 'the symbol definition image file') for which the device driver is configured (col. 6, lines 62-66 'a request from a utility').

Regarding Claim 25: The rejection of claim 24 is incorporated; further Carney discloses iteratively importing each symbol's kernel address (col. 6, lines 49-52 'comprise all current symbol definitions') and placing the address into a local variable for use by the device driver (col. 6, lines 1-3 'the address of the memory object').

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,303,392 to Carney et al. (Carney) in view of US 6,298,440 B1 to Siegel (Siegel).

Regarding Claim 22: The rejection of claim 21 is incorporated; further Carney does not explicitly disclose the programmatic data structure used to maintain the symbol table (col. 5, lines 62-63 'symbol table'), but does disclose that the symbol table can take variable forms (col. 6, lines 22-26 'symbol and string tables that are different but essentially equivalent')

Siegel teaches the use of a linked list (col. 6, lines 49-50 'linked list of resource files') in an analogous art for the purpose of referencing code resources (col. 6, lines 40-42 'used to resolve references to resources').

It would have been obvious to a person of ordinary skill to use the linked list taught by Siegel (col. 6, lines 49-50) as the data structure representing the symbol table entries disclosed in Carney (col. 5, lines 64-66 'symbol definition entries'), because one of ordinary skill would have been motivated to provide reference to the symbol definition entries (col. 6, lines 40-42).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0,101,290 A1 to Lin et al. (Lin) in view of US 6,298,440 B1 to Siegel (Siegel).

Regarding Claim 22: The rejection of claim 21 is incorporated; further Lin does not explicitly disclose macros that build a linked list, but does disclose mapping

kernel function calls to driver functions (par. [0019], lines 6-10 'service layer which process the function calls and interfaces with proper device driver module')

Siegel teaches the use of a linked list (col. 6, lines 49-50 'linked list of resource files') in an analogous art for the purpose of referencing code resources (col. 6, lines 40-42 'used to resolve references to resources').

It would have been obvious to a person of ordinary skill to use the linked list taught by Siegel (col. 6, lines 49-50) as the data structure representing the mapping between function calls disclosed in Lin (par. [0019], lines 6-10), because one of ordinary skill would have been motivated to provide reference to the symbol definition entries (col. 6, lines 40-42).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

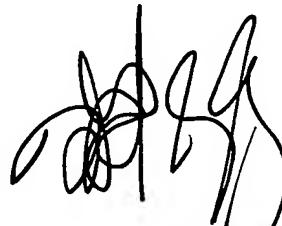
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Mitchell
10/13/05



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